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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/583,352

04/20/2007

Thomas Holzbaur

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EXAMINER

COLEMAN, KEITH A

ART UNIT

PAPER NUMBER

4175

MAIL DATE

DELIVERY MODE

10/17/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/583,352

Applicant(s)

HOLZBAUR ET AL.

Examiner

Keith A. Coleman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 6/19/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/19/2006.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application
- ☐ Other: ____.

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 8, 9, 10 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are charge- air/coolant radiator. The '/' is interpreted as meaning 'charge air radiator and coolant radiator' or 'charge air radiator or coolant radiator'. In addition, the claims don't distinctly point out whether charge air radiator and coolant radiator are the same apparatus or two separate apparatuses. To further prosecution, 'charge- air/coolant radiator' is interpreted as a charge air cooler and radiator i.e. intercooler and a coolant radiator arranged or connected in parallel or in series.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Elmer (US Patent No. 4,176,630).

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With regards to claim 1 and to further prosecution, the patent to Elmer discloses a circuit arrangement having a low temperature coolant circuit (Abstract) for cooling charge air in a motor vehicle having a supercharger with a charge air cooler and coolant radiator (17,13, Col. 2, Lines 33-37), characterized in that wherein a temperature sensor (29, Col. 2, Lines 7-10) is provided at the coolant outlet of the coolant radiator (via passage 19 with sensor 26).

With regards to claim 3, the patent to Elmer discloses wherein the temperature sensor is a thermostat (Col. 2, Lines 6-10).

5. Claims 1, 2, 6, 9, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Susa et al. (US Patent No. 5,353,757).

With regards to claim 1, the patent to Susa et al. discloses a circuit arrangement having a low temperature coolant circuit (Abstract) for cooling charge air in a motor vehicle having a supercharger (2, Col. 4, Lines 60-65) with a charge air cooler and coolant radiator (4,5, Col. 4, Lines 60-65), characterized in that wherein a temperature sensor (18, Col. 5, Lines 35-40) is provided at the coolant outlet of the coolant radiator (via passage 14 with sensor 18).

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With regards to claim 2, the patent to Susa et al. discloses the circuit arrangement characterized in wherein the coolant flow rate is controlled as a function of the determined coolant temperature (via thermostat 18, Figures 1 and 2).

With regards to claim 6, the patent to Susa et al. discloses wherein the low temperature coolant circuit (13,14) is connected to a main coolant circuit (13,14,20,22), so that there is an exchange of coolant.

With regards to claim 7, the patent to Susa et al. discloses wherein a control valve (18, See Figure 1) is arranged in the low temperature coolant circuit.

With regards to claim 9, the patent to Susa et al. discloses wherein the coolant traveling from the coolant radiator (5, Col. 4, Lines 60-65) is fed upstream of a pump (19, Col. 5, Lines 51-55) to a main coolant circuit (13,14,20,22,23).

With regards to claim 10, Susa et al. discloses a method for operating a circuit arrangement having a low temperature circuit (13,14) for cooling charge air (via circuits 23, 20 and 22) in a motor vehicle having a supercharger (2, Col. 4, Lines 60-65) with a charge air cooler and coolant radiator (4,5, Col. 4, Lines 60-65), characterized in that wherein the coolant flow rate through the charge air cooler and coolant radiator (4,5, Col. 4, Lines 60-65) is controlled as a function of the coolant temperature (18, Col. 5, Lines 35-40) determined at the charge air cooler and coolant radiator (4,5, Col. 4, Lines

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60-65). As to the coolant flow rate being a function of the coolant temperature, the thermostat inherently functions as such.

With regards to claim 11, Susa et al. discloses a method wherein the coolant flow rate through charge air cooler and coolant radiator are controlled taking into consideration engine load (via sensor 35, Figure 6, 104, Col. 8, Lines 38-45), in particular of a drive engine of the motor vehicle, a traveling speed of the motor vehicle (Col. 1, Lines 22-30), and an outside temperature (Col. 9, Lines 51-60).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

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the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Susa et al. (US Patent No. 5,353,757) in view of Matthew et al. (US Patent No. 6,679,431).

With regards to claim 4, the patent to Susa et al. discloses all the limitations of the claimed subject matter except wherein the temperature sensor is integrated into a plastic part, which serves to carry coolant. The patent to Matthew et al. discloses wherein the temperature sensor (14, Col. 1, Lines 65-68, Abstract) is integrated into a plastic part (10, Abstract), which serves to carry coolant (Col. 1, Lines 5-10). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the thermostat of Susa et al. with an integrated plastic part or plastic thermostat housing in view of the teaching to Matthew et al., in order to have a thermostat and housing that is reliable and easy to manufacture (Col. 1, Lines 20-25).

With regards to claim 5, the patent to Susa et al. discloses all the limitations of the claimed subject matter except wherein the plastic part is produced by means of

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plastic injection molding. The patent to Matthew et al. discloses wherein the plastic part (10) is produced by means of plastic injection molding (Col. 3, Lines 20-25). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the thermostat of Susa et al. with an integrated plastic part in view of the teaching to Matthew et al., in order to have a thermostat and housing that is reliable and easy to manufacture (Col. 1, Lines 20-25).

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Susa et al. in view of Emmerling (US Patent No. 4,317,439).

With regards to claim 8, the patent to Susa et al. discloses all the limitations of the claimed subject matter except wherein the control valve is arranged upstream of a low temperature coolant radiator or upstream of the coolant radiator. Emmerling discloses wherein the control valve (52) is arranged upstream of a low temperature coolant radiator (36). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the coolant radiator of Susa et al. with a control valve in view of the teaching to Emmerling, in order to proportion flow responsive to coolant temperatures (Col. 4, Lines 48-52).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Spinnler (US Patent No. 4,893,589) shows the current state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith A. Coleman whose telephone number is 571-270-3516. The examiner can normally be reached on Monday through Friday between 8-5 Eastern Time.

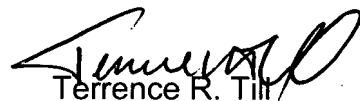
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrence Till can be reached on (571) 272-1280. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Terrence R. Till

Supervisory Patent Examiner

KAC

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